

REMARKS

Claims 6 and 30 have been amended to eliminate grammatical and typographical errors. In particular, “wo” has been eliminated from claim 30, and an extra “the” has been removed from claim 6 (thus overcoming the objection raised by the Examiner). No other amendments to the claims have been presented.

Claims 1 to 4, 6 to 21, and 23 to 30 are pending in the application. Given that the amendments do not present new issues and place the claims in better condition for allowance or appeal, the amendments should now be entered.

Claims 1-4, 6-21, 18-21, 23-28 and 30 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the “Admitted Prior Art shown in Figures 24-26 in view of Kuroyangi et al. (U.S. Patent 6,433,900) and Anderson et al (U.S. Patent 5,838,924). This rejection is respectfully traversed for the reason that the combination of the Admitted Prior Art and the references to Kuroyangi et al. and Anderson et al. does not suggest or show the claimed invention.

The Examiner has commented that “if the reference of Kuroyanagi is applied to the Admitted Prior Art (Fig. 24-26), it is possible to switch only the abnormal transmission path in PON”. However, if the main point of Kuroyanagi et al. (Patent No. 6433900) is simplified, it will become as shown in the following illustration 1:

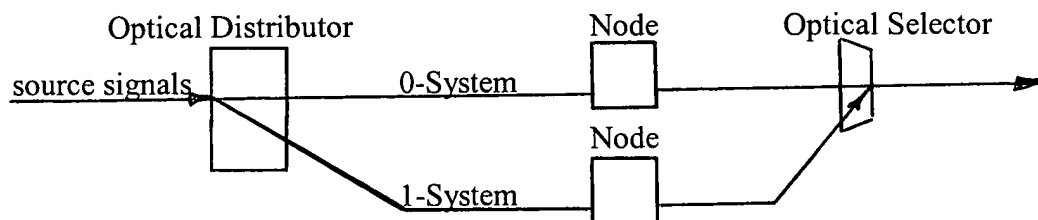


Illustration 1

The source signals are copied optically in an optical distributor, and either of the signals of the 0-System or the 1-system is selected in the Optical Selector of a receiving end. Under the present circumstances, it is the point of the invention that a 0-System signal /a 1-System signal can be selected for every optical

wavelength.

However, when the reference of Kuroyanagi is applied to the Admitted Prior Art (Figures 24-26), it is necessary to transmit the same signal optically copied to the transmission paths of a 0-System and a 1-System, and the bandwidth of the transmission path on the protection side cannot be freely used for the other object. Because of this, it is not possible to obtain the effect that the band of a transmission path of the protection side can be used freely like the present invention.

IN addition, according to the comment of the Examiner, "the method of not securing the protection channel beforehand is described by the reference of Anderson".

If the main point of Anderson et al. (Patent No. 5,838,924) is simplified, it will become as shown in the following Illustration 2.

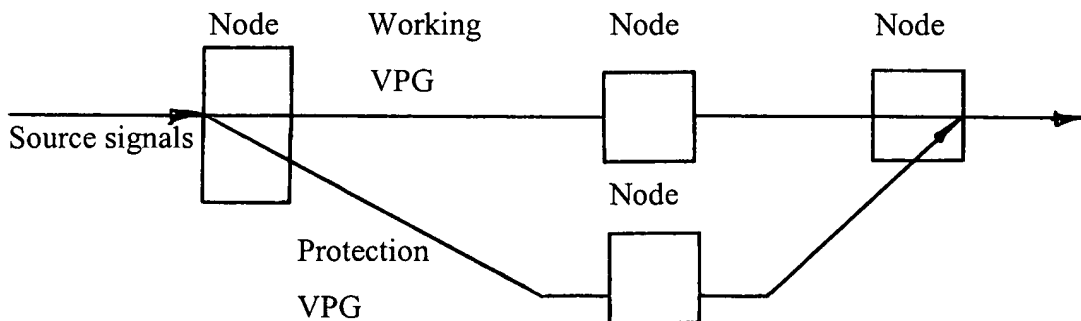


Illustration 2

It is constituted that the source signals are copied in the Node of the transmitting end, and in the Node of the receiving end, either of the signals of the Working VPG or the Protection VPG is selected. (However, this point is not the essence and the object of the invention of Anderson et al.)

However, it is described clearly that the signal of the working channel is copied to the protection channel in the Node of the transmitting end (column 4, line 4), and the band for the protection will always be used at least in the Node. According to the constitution of the present invention, the switching method does not use the band for protection at all can be realized also.

In the first place, the point of using the special OAM frame is the main

point of the invention of Anderson et al., and it cannot be applied to a standard ATM network. In addition, the object of the invention itself is different.

Further, as a point where both of Kuroyanagi et al. and Anderson et al. have in common, there is a point that the substantial transmission path is switched by copying on signal in the transmitting end and pluralizing it, and selecting and extracting any one of them in the receiving end.

On the other hand, according to the present invention, it is different from the above in the point that the transmission path where the actual data flows can be switched by switching (changing the setting of) SW in OLT which is the transmitting end. As a result of this, since the transmission path can be freely changed by the operation on the side of OLT, the flexible protection control can be made possible from the viewpoint of the switching procedure, the method of assigning the band, the switchback, etc. This has a merit especially in the access network which is the application area of PON. (This is in view of the background that, since OLT is set up in the station office, and ONU is set up in the subscriber's home, it is desired that various controls be performed by the initiatives of OLT side as much as possible, and that the processing in ht ONU side be simplified.)

Claims 17 and 29 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the Admitted Prior Art in view of Kuroyanagi et al. as applied to claims 1-4, 12, 15, 16, 19-21 and 28 above, and further in view of Eng et al. (U.S. Patent 5,455,701). This rejection is respectfully traversed.

The Examiner relies on the patent to Eng et al. to show an asynchronous transfer mode packet switching system. Eng et al. does not teach a "protection switching method for a passive optical network (PON) system" as specifically recited in independent claim 1 or a "protection switching apparatus for a passive optical network (PON) system" as specifically recited in claim 12, and even if the teachings of Eng et al. could be combined with the Admitted Prior Art and the patent to Kuroyanagi et al., it would not result in the claimed invention.

The Examiner relies on the patent to Anderson to provide a teaching that a

protection channel bandwidth is not reserved and may be shared by several working connections. This “teaching” by Anderson et al. does not suggest “setting an active-system virtual path and a standby-system virtual path between said optical line terminal and said subscriber terminal in *different* bands” (emphasis added) as recited in independent claims 1 and 12.

The Examiner again is reminded of the basic considerations which apply to obviousness rejections as set out in MPEP 2141. Specifically, “When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- “(A) The claimed invention must be considered as a whole;
- “(B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- “(C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
- “(D) Reasonable expectation of success is the standard with which obviousness is determined.”

Basically, the Examiner is attempting to reconstruct Applicant’s claimed invention based on the hindsight of Applicant’s own disclosure which is not permitted by Section 103 of the Patent Statute (i.e., this would be an impermissible “hindsight” reconstruction).

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1 to 4, 6 to 21, and 23 to 30 be allowed, and that the application be passed to issue. In alternative, it is requested that this amendment be entered for purpose of appeal.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

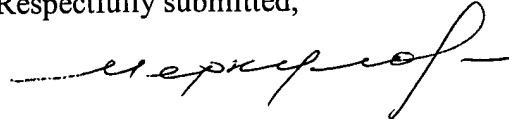
A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any

Docket F13998-A
Serial No: 09/537,773

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overpayment of fees to Attorney's Deposit Account No. 50-2041 (Whitham,
Curtis & Christofferson, P.C.).

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'O. Merkoulou', with a long horizontal flourish extending to the right.

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